Fort Fairfield Acquisition/Relocation Project

Full Mitigation Best Practice Story

Aroostook County, Maine

Fort Fairfield, ME – The spring of 2005 witnessed another massive ice jam and flooding on the Aroostook River in northern Maine. This time, the residents of Fort Fairfield remained high and dry; in the past, they had to flee their homes and wait anxiously for the water to recede. The business district also escaped the recent flood.

“This event (2005) was of longer duration than any in recorded history,” said Tony Levesque, Fort Fairfield’s community development director and code enforcement officer. “We closed some roads and the bridge several times and water in some driveways limited the access to the homes, but we had no structural damage.”

The community withstood the event thanks to extensive flood mitigation measures adopted by the Town of Fairfield over the past 10 years.

The town government led the initiative, with the help of the Federal Emergency Management Agency (FEMA), the U.S. Army Corps of Engineers (USACE), and several local, non-profit, state, and federal agencies. It produced the results the community had long been aiming for. “This year, there was no property damage to homes or the business district,” Levesque noted.

Funding came from a variety of sources including the FEMA Hazard Mitigation Grant Program (HMGP), Community Development Block Grants from the U.S. Department of Housing and Urban Development, state and local sources, and a grant from the Aroostook Band of the Micmac Tribe.

A flood warning system enhanced the town’s preparedness. It was developed in cooperation with the National Weather Service and local power companies. The system alerted local officials to dangerous situations within minutes and warned the community quickly.

The Aroostook River is near the Canadian border in northern Maine. In a typical winter, the river is blanketed with snow and can be frozen two feet thick or more for months. Periodically, the region experiences a warm spell. When the temperature rises above freezing, the ice begins to break up and jams form. Ice jams, rain, and melting ice and snow create a serious flood hazard. In the past, homes and businesses flooded, residents fled their homes, and there were daring rescues, including one in which people were evacuated in the bucket of a front-end loader. This destructive jam-and-flood scenario occurred six times from 1988 to 1994.

The Aroostook River, clogged by an ice jam and unable to accommodate runoff from unseasonably warm weather and heavy rain, overflowed its banks in 1993. A federal disaster declaration resulted, prompting local officials to seek a solution to stop this destructive cycle.

Fort Fairfield initially adopted the approach “dike, dredge, and move,” Levesque noted. The objective was to build a dike to protect the business district because the businesses could not be moved, dredge the river so that it could hold a greater volume of water, and move the families out of the flood-prone area along East and West Riverside Avenues. The town later decided not to pursue dredging because it was not affordable and it was not a long-term solution, Levesque explained.

The USACE turned down the town’s original dike proposal because it was not cost-effective. That decision turned out to be quite fortuitous decades later, as Levesque explained: “If we had built the dike as designed in the 1970s, it would have overtopped [in the 1990s] and created a pool of water behind the dike that had no place to go.”

In 1994, an ice jam and flooding event again resulted in a federal disaster declaration. The town responded by developing a two-pronged attack on the problem. First, local officials resolved to develop a project aimed at acquiring or relocating 46 homes near the river that were continually at risk of flooding. The project was awarded funding under the HMGP. The second solution was, again, to build a dike to protect vulnerable sections of the business district.

The town developed a multi-part strategy. First, it drafted a voluntary acquisition and relocation program. Homeowners had the following options: sell their flood-prone properties to the town and move to Forest Heights, a hillside subdivision already owned by the town; elevate their homes and remain where they were; participate in acquisition by the town; or participate in partial acquisition and relocation to sites other than Forest Heights.

Fort Fairfield hosted a town meeting than included a community supper, provided with the assistance of the Red Cross. There were separate breakout sessions for flood-affected residents and flood-affected businesses so that group-specific questions could be addressed.

Levesque hired David Wright to work for the town as a full-time mitigation and relocation coordinator, a position Wright held from 1994 to 1998. Next, FEMA activated its stand-by technical assistance contractor to help develop a flood-proofing strategy for Main Street businesses. The final step was to establish a new Base Flood Elevation (BFE), taking the April 16, 1994, flood event into consideration. A new BFE was determined through coordination of the USACE, FEMA, and the U.S. Geological Survey.

With planning, foresight, and lessons from past hazard events, Fort Fairfield developed a permanent solution to protect the flood-prone community. Not only did the town prevent future damages, but it also created additional flood storage, provided recreational space, and protected natural and cultural resources. Fort Fairfield proved that mitigation can protect families and communities.

Activity/Project Location

Geographical Area:	**Single County in a State**
FEMA Region:	**Region I**
State:	**Maine**
County:	**Aroostook County**
City/Community:	**Fort Fairfield**

Key Activity/Project Information

Sector:	**Public**
Hazard Type:	**Flooding**
Activity/Project Type:	**Acquisition/Buyouts; Flood Control**
Activity/Project Start Date:	**08/1994**
Activity/Project End Date:	**12/2000**
Funding Source:	**Hazard Mitigation Grant Program (HMGP); Local Sources; Non-profit organization (NPO); State sources; Other Federal Agencies (OFA); U.S. Small Business Administration (SBA)**
Funding Recipient:	**Local Government**
Application/Project Number:	**9999**

Activity/Project Economic Analysis

Cost:	**Amount Not Available**

Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster?	**Yes**
Federal Disaster #:	**1029 , 05/13/1994**
Federal Disaster Year:	**1994**
Value Tested By Disaster?	**Yes**
Tested By Federal Disaster #:	**No Federal Disaster specified**
Year First Tested:	**2005**
Repetitive Loss Property?	**Yes**

Reference URLs

Reference URL 1:	**http://www.fortfairfield.org**
Reference URL 2:	**http://www.state.me.us/spo/flood/**

Main Points

- The Fort Fairfield community withstood a Spring 2005 ice jam and flood event thanks to extensive flood mitigation measures adopted by the town over the past 10 years.
- Funding for an acquisition/relocation project came from a variety of souces, including the FEMA Hazard Mitigation Grant Program (HMGP), Community Development Block Grants from the U.S. Department of Housing and Urban Development, state and local sources, and a grant from the Aroostook Band of the Micmac Tribe.
- A total of 46 homes at continual risk of flooding were acquired or relocated through an HMGP project.

Large pieces of river ice deposited around nearby homes.

River ice flowed harmlessly over the road in the 2005 flood.